I. CLAIM AMENDMENTS

Please amend the claims as follows:

1. (original) A method for producing nitrogen for a well site operation, the method comprising:

mixing air and a reducing gas to obtain an inlet gas;

wherein the air comprises oxygen and nitrogen;

feeding the inlet gas into a reactor;

in a reactor, reacting the reducing gas with the oxygen in the air to substantially eliminate the oxygen, thereby producing an effluent gas comprising nitrogen and water;

separating the nitrogen in the effluent gas from the water in the effluent gas; and

using the nitrogen in a well site operation.

2. (original) The method of claim 1 further comprising:

separating the water in the effluent gas into a hydrogen gas and an oxygen gas;

selling the oxygen gas; and

recycling the hydrogen gas into the inlet gas.

3. (original) The method of claim 2 wherein the separation of the hydrogen gas and the oxygen gas from the water is by electrolysis.

4. (original) The method of claim 1 further comprising:

separating the water into a hydrogen gas and an oxygen gas; and

selling or venting the oxygen gas.

5. (original) The method of claim 4 wherein the separation of the hydrogen gas and the oxygen gas from the water is by electrolysis.

6. (original) The method of claim 1 wherein the reaction between the reducing gas and the oxygen is a catalyzed reaction.
7. (original) The method of claim 6 wherein the catalyst is platinum.
8. (original) The method of claim 1 wherein the reaction between the reducing gas and the oxygen is a deoxygenation reaction.
9. (original) The method of claim 1 wherein the reactor maintains a temperature high enough to support the reaction and low enough to prevent damage to the catalyst.
10. (original) The method of claim 2 wherein the reactor maintains a temperature between approximately 200°F and approximately 1000°F.
11. (original) The method of claim 1 wherein the reducing gas is hydrogen.
12. (original) The method of claim 1 wherein the reducing gas is a gaseous hydrocarbon.
13. (original) The method of claim 1 wherein the well site operation is drilling.
14. (original) The method of claim 1 wherein the well site operation is under balanced drilling.
15. (original) The method of claim 1 wherein the well site operation is production.
16. (original) The method of claim 1 wherein the well site operation is secondary recovery.
17. (original) The method of claim 1 wherein the well site operation is pipeline cleaning.
18. (original) The method of claim 1 wherein a heat exchanger is used to regulate the temperature of the reactor.
19. (original) The method of claim 18 wherein the heat exchanger is an air cooler.
20. (original) The method of claim 1 wherein the nitrogen in the effluent gas is separated from the water in the effluent gas using a dryer.
21. (original) The method of claim 20 wherein the dryer is a heat exchanger.
22. (original) The method of claim 20 wherein the dryer is a chemical dryer.

23. (original) The method of claim 1 wherein the heat from the reaction between the reducing gas and the oxygen is used to produce electricity.

24. (withdrawn) An apparatus for separating air into nitrogen and oxygen, the apparatus comprising:

a mixing chamber that mixes air and a reducing gas to obtain an inlet gas;

wherein the air comprises oxygen and nitrogen;

wherein the inlet gas is fed into a reactor;

wherein the reactor reacts the reducing gas with the oxygen in the air to substantially eliminate the oxygen, thereby producing an effluent gas comprising nitrogen and water;

a first separator that separates the nitrogen in the effluent gas from the water in the effluent gas; and

a second separator that separates the water in the effluent gas into a hydrogen gas and an oxygen gas.

25. (withdrawn) The apparatus of claim 24 further comprising:

wherein the nitrogen is used in a well site operation.

26. (withdrawn) The apparatus of claim 24 further comprising:

wherein the oxygen gas is sold; and

wherein the hydrogen gas is recycled into the inlet gas.

27. (withdrawn) The apparatus of claim 26 wherein the second separator uses electrolysis to separate the hydrogen gas and the oxygen gas from the water.

28. (withdrawn) The apparatus of claim 26 further comprising:

wherein the oxygen gas is sold or vented.

29. (withdrawn) The apparatus of claim 28 wherein the second separator uses electrolysis to separate the hydrogen gas and the oxygen gas from the water.

30. (withdrawn) The apparatus of claim 24 wherein the reaction occurring in the reactor between the reducing gas and the oxygen in the air is a catalyzed reaction.

31. (withdrawn) The apparatus of claim 30 wherein the catalyst is platinum.

32. (withdrawn) The apparatus of claim 24 wherein the reaction occurring in the reactor between the reducing gas and the oxygen is a deoxygenation reaction.

33. (withdrawn) The apparatus of claim 24 wherein the reactor maintains a temperature high enough to support the reaction and low enough to prevent damage to the catalyst.

34. (withdrawn) The apparatus of claim 25 wherein the reactor maintains a temperature between approximately 200°F and approximately 1000°F.

35. (withdrawn) The apparatus of claim 24 wherein the reducing gas is hydrogen.

36. (withdrawn) The apparatus of claim 24 wherein the reducing gas is a gaseous hydrocarbon.

37. (withdrawn) The apparatus of claim 24 wherein the well site operation is drilling.

38. (withdrawn) The apparatus of claim 24 wherein the well site operation is under balanced drilling.

39. (withdrawn) The apparatus of claim 24 wherein the well site operation is production.

40. (withdrawn) The apparatus of claim 24 wherein the well site operation is secondary recovery.

41. (withdrawn) The apparatus of claim 24 wherein the well site operation is pipeline cleaning.

42. (withdrawn) The apparatus of claim 24 further comprising:

a heat exchanger used to regulate the temperature of the reactor.

43. (withdrawn) The apparatus of claim 42 wherein the heat exchanger is an air cooler.

44. (withdrawn) The apparatus of claim 24 wherein the first separator is a dryer.

45. (withdrawn) The apparatus of claim 44 wherein the dryer is a heat exchanger.

46. (withdrawn) The apparatus of claim 44 wherein the dryer is a chemical dryer.

47. (withdrawn) The apparatus of claim 24 wherein the heat from the reaction between the reducing gas and the oxygen is used to produce electricity.

48. (withdrawn) An apparatus for use at a well site, the apparatus comprising:

means for mixing air and a reducing gas to obtain an inlet gas;

wherein the air comprises oxygen and nitrogen;

means for feeding the inlet gas into a reactor;

means for reacting the reducing gas with the oxygen in the air to substantially eliminate the oxygen, thereby producing an effluent gas comprising nitrogen and water;

means for separating the nitrogen in the effluent gas from the water in the effluent gas; and

means for using the nitrogen in a well site operation.

49. (withdrawn) The apparatus of claim 48 further comprising:

means for separating the water in the effluent gas into a hydrogen gas and an oxygen gas;

means for selling the oxygen gas; and

means for recycling the hydrogen gas into the inlet gas.

50. (withdrawn) The apparatus of claim 49 wherein the means for separating the hydrogen gas and the oxygen gas uses electrolysis.

51. (withdrawn) The apparatus of claim 48 further comprising:

means for separating the water into a hydrogen gas and an oxygen gas; and

means for selling or venting the oxygen gas.

52. (withdrawn) The apparatus of claim 51 wherein the means for separating the hydrogen gas and the oxygen gas from the water uses electrolysis.

53. (withdrawn) The apparatus of claim 48 wherein the reaction between the reducing gas and the oxygen is a catalyzed reaction.

54. (withdrawn) The apparatus of claim 53 wherein the catalyst is platinum.

55. (withdrawn) The apparatus of claim 48 wherein the reaction between the reducing gas and the oxygen is a deoxygenation reaction.

56. (withdrawn) The apparatus of claim 48 wherein the means for reacting maintains a temperature high enough to support the reaction and low enough to prevent damage to the catalyst.

57. (withdrawn) The apparatus of claim 56 wherein the means for reacting maintains a temperature between approximately 200°F and approximately 1000°F.

58. (withdrawn) The apparatus of claim 48 wherein the reducing gas is hydrogen.

59. (withdrawn) The apparatus of claim 48 wherein the reducing gas is a gaseous hydrocarbon.

60. (withdrawn) The apparatus of claim 48 wherein the well site operation is drilling.

61. (withdrawn) The apparatus of claim 48 wherein the well site operation is under balanced drilling.

62. (withdrawn) The apparatus of claim 48 wherein the well site operation is production.

63. (withdrawn) The apparatus of claim 48 wherein the well site operation is secondary recovery.

64. (withdrawn) The apparatus of claim 48 wherein the well site operation is pipeline cleaning.

65. (withdrawn) The apparatus of claim 48 wherein a heat exchanger is used to regulate the temperature of the means for reacting.

66. (withdrawn) The apparatus of claim 65 wherein the heat exchanger is an air cooler.

67. (withdrawn) The apparatus of claim 48 wherein the nitrogen in the effluent gas is separated from the water in the effluent gas using a means for drying.

68. (withdrawn) The apparatus of claim 67 wherein the means for drying is a heat exchanger.

69. (withdrawn) The apparatus of claim 67 wherein the means for drying is a chemical dryer.

70. (withdrawn) The apparatus of claim 48 wherein the heat from the reaction between the reducing gas and the oxygen is used to produce electricity.

71. (withdrawn) An apparatus for use at a well site, the apparatus comprising:

means for mixing air and a reducing gas to obtain an inlet gas;

wherein the air comprises oxygen and nitrogen;

means for feeding the inlet gas into a reactor;

means for reacting the reducing gas with the oxygen in the air to substantially eliminate the oxygen, thereby producing an effluent gas comprising nitrogen and water;

wherein a heat exchanger is used to regulate the temperature of the means for reacting;

means for separating the nitrogen in the effluent gas from the water in the effluent gas;

means for using the nitrogen in a well site operation;

means for separating the water in the effluent gas into a hydrogen gas and an oxygen gas using electrolysis;

means for selling the oxygen gas;

means for recycling the hydrogen gas into the inlet gas;

wherein the reaction between the reducing gas and the oxygen is a deoxygenation reaction using platinum as a catalyst;

wherein the means for reacting maintains a temperature high enough to support the reaction and low enough to prevent damage to the catalyst;

wherein the means for reacting maintains a temperature between approximately 200°F and approximately 1000°F;

wherein the heat from the reaction between the reducing gas and the oxygen is used to produce electricity.

72. (withdrawn) The apparatus of claim 71 wherein the reducing gas is hydrogen.

73. (withdrawn) The apparatus of claim 71 wherein the reducing gas is a gaseous hydrocarbon.

74. (withdrawn) The apparatus of claim 71 wherein the well site operation is drilling.

75. (withdrawn) The apparatus of claim 71 wherein the well site operation is under balanced drilling.

76. (withdrawn) The apparatus of claim 71 wherein the well site operation is production.

77. (withdrawn) The apparatus of claim 71 wherein the well site operation is secondary recovery.

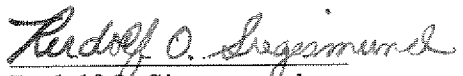
78. (withdrawn) The apparatus of claim 71 wherein the well site operation is pipeline cleaning.

79. (withdrawn) The apparatus of claim 71 wherein the heat exchanger is an air cooler.

80. (withdrawn) The apparatus of claim 71 wherein the means for drying is a heat exchanger.

81. (withdrawn) The apparatus of claim 71 wherein the means for drying is a chemical dryer.

Respectfully submitted,



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